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ABSTRACT

This study reports relationships found between FIRO-B (Fundamental Interpersonal Relations Orientation) scores and preference for classroom spatial settings. It was hypothesized that differences in interpersonal needs would be reflected in preferences for particular physical environments in which to teach. The sample consisted of 276 graduates and undergraduates enrolled in courses in the Syracuse University School of Education. The majority of the graduates had had experience as teachers. The FIRO-P and a questionnaire designed for the study were administered to determine preferred classroom settings. Chi square values determined significance of relationships. Results indicate a definite relationship between interpersonal needs scores and classroom preferences. As predicted, persons with high control needs opted for a structured situation with the teacher in a position of control. Low control individuals selected settings in which the teacher's control position was less obvious. This relation between interpersonal needs of teachers and the classroom environment has implications for teacher and student grouping. Further research is needed to determine the importance of these findings for learning. (Author/RT)

# The Relationship Between Interpersonal Relations Orientations and Preferred Classroom Physical Settings[1]

by

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[1] Prepared for presentation at the 1970 Convention of the American Educational Research Association, Minneapolis, Minnesota.

# INTRODUCTION

Events of the past decade and trends for the immediate future indicate that the traditional classroom setting-- the teacher in front of a class in neat rows-- is undergoing significant, if not revolutionary, changes. New curricula, new methods of teaching, and altered expectations for the teaching-learning process have combined to change classroom environments. Structurally, the non-graded school, team teaching, the use of para-professionals, and schools without walls have created new and potentially challenging and/or threatening classroom settings, for both teachers and students.

Methodologically, independent study, individually prescribed instruction, and modular scheduling are a few of the many innovations which have mitigated against the self-contained classroom and its typical physical arrangement with teacher as the focus of attention. Substantively, it would seem that these new thrusts have shifted the emphasis from teacher initiated and controlled activities to ones with more student freedom, control, and initiation.

Most measures of the effects of innovation in the classroom have focused on the increase in learning which is measured by an assessment of content assimilation. It may also be that structural changes within the classroom have contributed to the comfort or discomfort of students and teachers in the learning environment. If this is the case, it is probable that environments which are comfortable for teachers and students are those which serve to facilitate the learning process itself.

The purpose of this study was to examine the relationships between interpersonal needs and the physical setting of the classroom.

The primary question raised was:

Is there a relationship between interpersonal needs orientation and choices for most comfortable and least comfortable classroom settings?

The construct of interpersonal needs has been described by Schutz (1958). Measurement has been achieved through use of FIRO-B (Fundamental Interpersonal Relations Orientation). This questionnaire measures needs for inclusion, control, and affection. For each of these a score is obtained for an expressed need and a wanted need.* These six categories, inclusion (expressed and wanted), control (expressed and wanted), and affection (expressed and wanted) were the indices designated as the independent variable.

The dependent variable, comfort or discomfort with particular classroom settings was measured by an instrument designed for this study, the "Teaching and Learning Preference Questionnaire", which is shown in Figure I. Each participant in the study was asked to select and rank the two classroom arrangements in which he would feel most comfortable and two in which he would feel least comfortable. He did this while projecting himself into the teacher role and then the student role.

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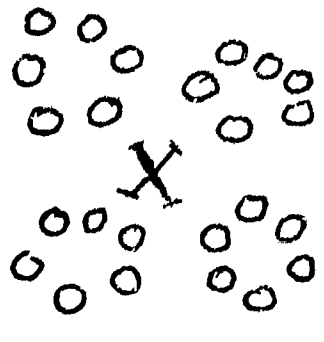
*Schutz (pg. 52) defines briefly each of the six dimensions of FIRO-B.
"Expressed inclusion-- I initiate interaction with people.
Wanted inclusion-- I want to be included.
Expressed control-- I control people.
Wanted control-- I want people to control me.
Expressed affection-- I act close and personal toward people.
Wanted affection-- I want people to get close and personal with me."

FIGURE I

TEACHING AND LEARNING PREFERENCE
QUESTIONNAIRE

*1*



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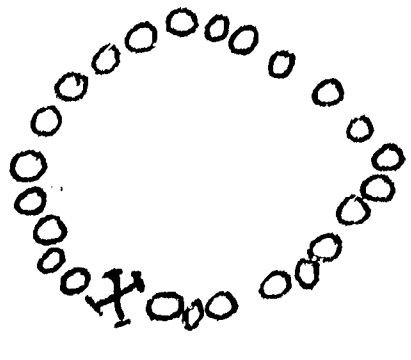

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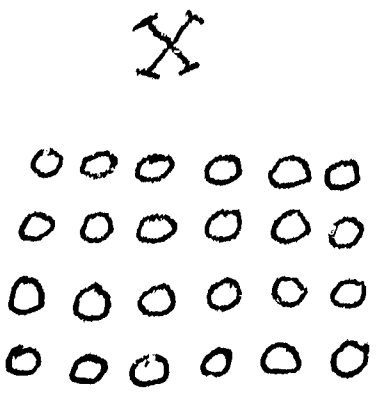

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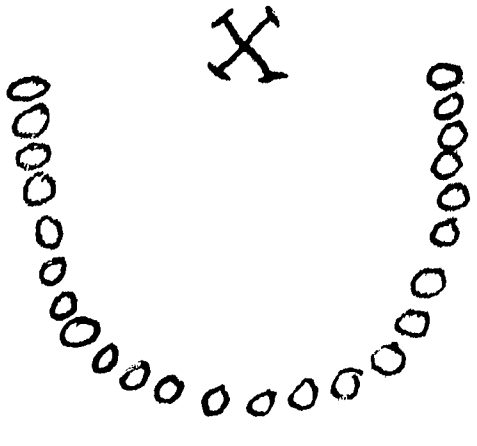
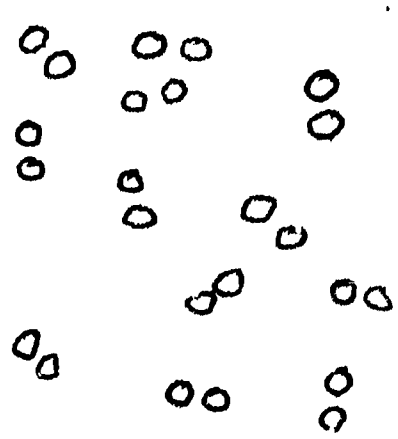
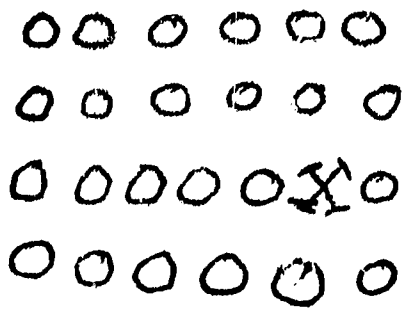




(No Teacher)

*5*



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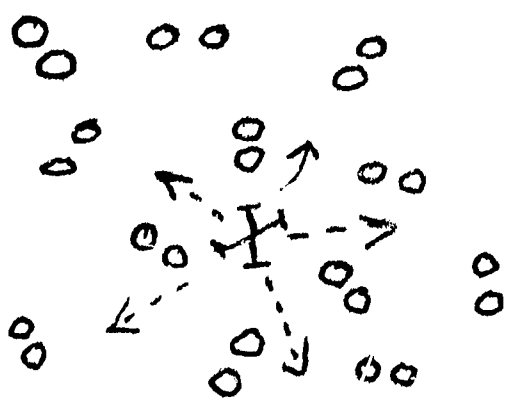

(Teacher Moves Freely)

*7*

"0" = student location.
"X" = teacher location.

Conceptually, the following model is proposed to serve as rationale for the study.

Each student and teacher has internalized interpersonal characteristics or needs, which he takes with him into the classroom situation. These are met or denied to some undetermined degree by the environment and activities that occur within the physical setting of the classroom. No doubt the nature of interpersonal interaction, the perceptions of self and others, the nature of the subject taught, and other factors interact to gratify or block the meeting of these needs. It is assumed that the satisfaction of interpersonal needs gives rise to a feeling of comfort and, conversely, failure to meet needs leads to a feeling of discomfort. The problem defined earlier deals only with that comfort or discomfort which may relate to the physical setting within the classroom.

Although it is not the purpose of this study to determine the effect of comfort or discomfort on the amount of learning which takes place, it is intuitively postulated that such a relationship does exist. If interpersonal needs are related to comfort or discomfort within the classroom environment and subsequently with the quality of the teaching-learning process, this should have implications for development of curricula and selection of teachers and students for specific classrooms, as well as for influencing the actual physical design of the school plant.

## DESIGN

It was hypothesized that there would be a relationship between interpersonal needs, as measured by FIRO-B, and the selections which would be made for most comfortable and least comfortable as teacher and student. Referring to Figure I, it was hypothesized that individuals would make selections based upon the following assumptions:

ASSUMPTIONS

1. Settings 3 and 4 would be most comfortable for individuals with high needs for control, both wanted and expressed, both as students and as teachers.
2. Settings 1 and 7 would be comfortable for those with low control needs, especially as teachers.
3. Settings 2, 3, and 4 would be selected as comfortable for those with low wanted control needs, as students. They would also be comfortable for those with low inclusion and affection needs.
4. Settings 1 and 7 would be comfortable for those with high expressed control needs and high inclusion needs.
5. Because of the high correlation which was found to exist between the dimensions of inclusion and affection (Schutz, pg. 80), it is expected that few differences will be observed in the choices of high and low affection and inclusion individuals.

With respect to least comfortable settings, the converse of the above was generally assumed. For example, persons who would feel most comfortable in a low control setting such as 1 or 7, would feel least comfortable in settings 2, 3, and 4.

Situations 5 and 6 were included for their atypical quality. It was assumed that because they have elements of no control (5), and both high and low control (6) that they would be chosen among those least desired as comfortable.

The FIRO-B scores range on a scale from 0 to 9. For this study, "high" are those scores falling in the range 7-9, and "low" are those of 0-2.

The sample consisted of 276 graduates and undergraduates enrolled in courses in the School of Education at Syracuse University. The majority of the graduates in the sample had had experience as teachers. Although the sample was not randomly selected, diverse areas within the School of Education participated in the study.

## RESULTS

The primary interest of the investigators was with the control dimensions of the FIRO-B and the notion that the concept of control in the classroom is of major concern to some teachers (and administrators). The current innovations in curriculum, requiring a variety of learning environments, would seem to threaten or at least reduce the amount of control between teacher and students.

Table 1 gives the first choices of participants for most comfortable and least comfortable settings as teachers and students on the control dimension. Some observations are apparent. There is no difference for least comfortable as teachers. Setting 6 and 1 are least desired regardless of control scores. For expressed control (desire to control others) there are no differences for choice as teacher. The second ranked setting for the remaining five cells differ, however. These differences will be discussed in the following section.

When first and second choices are combined (see Table 2) setting 4 is most comfortable as teacher for high and low control persons. However, the second ranked choice is 3 for high control and 7 for low control individuals.

This trend is seen to persist for wanted settings as students. Both high and low expressed control and low wanted control persons selected 3 and for high wanted control 4; but the second ranked choice for high control individuals was 4 and 2, while low control persons selected setting 7.

Little trend appears for teacher or student least comfortable choices.

TABLE 1 FIRO-B

CONTROL FIRST CHOICE

| | | EXPRESSED RANKED FIRST | EXPRESSED RANKED SECOND | WANTED RANKED FIRST | WANTED RANKED SECOND |
|---|---|---|---|---|---|
| TEACHER MOST COMFORTABLE | HIGH | 7 | 4 | 4 | 3 |
| | LOW | 7 | 4 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 3 | 1 | 4 | 2 |
| | LOW | 4 | 3 | 7 | 4 |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 1 | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 7 | 6,2 (tie) | 7 | 6 |
| | LOW | 6 | 1 | 6 | 3 |

TABLE 2 FIRO-B

CONTROL FIRST AND SECOND CHOICES (POOLED)

| | | EXPRESSED RANKED FIRST | EXPRESSED RANKED SECOND | WANTED RANKED FIRST | WANTED RANKED SECOND |
|---|---|---|---|---|---|
| TEACHER MOST COMFORTABLE | HIGH | 4 | 3 | 4 | 3 |
| | LOW | 4 | 7 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 3 | 4 | 4 | 2 |
| | LOW | 3 | 7 | 3 | 7 |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 1 | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 7 | 6 | 1 |
| | LOW | 6 | 1 | 6 | 4 |

Table 3 shows the results for persons with high and low inclusion needs and their first choices as teacher and student. Both high and low inclusion persons felt most comfortable in setting 4, both as teacher and student. High wanted inclusion persons chose 3 as a second ranked choice for most comfortable as teacher in contrast to the three remaining cells, which selected 7 as being second most desired. Again, 6 and 1 were least desired.

Table 4 shows the pooled first and second choices and first and second rankings for inclusion. The trends observed in Table 3 are accentuated. The second ranked choices for teacher for high inclusion individuals was 3, while low expressed inclusion persons selected setting 1 more frequently than 3 or 4. There does not seem to be a different trend for "student least comfortable" or "teacher least comfortable".

Table 5 shows the first choices for the affection dimension of FIRO-B and most and least comfortable settings for teacher and student. Little difference between high and low expressed or wanted affection are apparent. Seven of the eight first ranked settings are identical within categories.

When the first and second choices are pooled (see Table 6) the only new information apparent is that high affection wanted persons, as students want setting 7, the dyadic situation. This Table gives rise to further questions because setting 7 appears as a second ranked choice for both most comfortable and least comfortable selections.

Table 7 combines Tables 2, 4, and 6 and indicates that persons as students and teachers feel most comfortable and least comfortable in the same settings. More specifically, it appears to be true that participants desired setting 4 as being most comfortable as teacher and student and felt least comfortable in settings 1 and 6.

TABLE 3 FIRO-B

INCLUSION FIRST CHOICE

| | | EXPRESSED RANKED FIRST | EXPRESSED RANKED SECOND | WANTED RANKED FIRST | WANTED RANKED SECOND |
|---|---|---|---|---|---|
| TEACHER MOST COMFORTABLE | HIGH | 4 | 7 | 4 | 3 |
| | LOW | 4 | 7 | 7 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 4 | 7 | 4 | 3 |
| | LOW | 4 | 5 | 4 | 3 |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 1,4 (tie) | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 3 | 6 | 7 |
| | LOW | 5,2 (tie) | 5,2 (tie) | 6 | 3 |

TABLE 4 FIRO-B

INCLUSION FIRST AND SECOND CHOICES (POOLED)

| | | EXPRESSED RANKED FIRST | EXPRESSED RANKED SECOND | WANTED RANKED FIRST | WANTED RANKED SECOND |
|---|---|---|---|---|---|
| TEACHER MOST COMFORTABLE | HIGH | 4 | 3 | 4 | 3 |
| | LOW | 4 | 7 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 4 | 3 | 4 | 3 |
| | LOW | 1 | 3 | 4 | 2 |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 1,6 (tie) | 1,6 (tie) | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 4 | 6 | 1 |

TABLE 5 FIRO-B

AFFECTION FIRST CHOICE

| | | EXPRESSED | | WANTED | |
|---|---|---|---|---|---|
| | | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND |
| TEACHER MOST COMFORTABLE | HIGH | 4 | 7 | 4 | 7 |
| | LOW | 4 | 7 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 7 | 4 | 7 | 4 |
| | LOW | 4 | 3 | 7 | 3 |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 1 | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 3 | 6 | 5 |
| | LOW | 6 | 5 | 6 | 3 |

TABLE 6 FIRO-B

AFFECTION FIRST AND SECOND CHOICES (POOLED)

| | | EXPRESSED | | WANTED | |
|---|---|---|---|---|---|
| | | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND |
| TEACHER MOST COMFORTABLE | HIGH | 4 | 7 | 4 | 7 |
| | LOW | 4 | 7 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 4 | 7 | 7 | 4 |
| | LOW | 4,3 (tie) | 4,3 (tie) | 4,3 (tie) | 4,3 (tie) |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 |
| | LOW | 6 | 1 | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 7 | 6 | 1 |
| | LOW | 6 | 7 | 6 | 1,7 (tie) |

TABLE 7

FIRO-B -- FIRST AND SECOND CHOICES (POOLED)

| TEACHING AND LEARNING PREFERENCE | | INCLUSION | | | | CONTROL | | | | AFFECTION | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | EXPRESSED | | WANTED | | EXPRESSED | | WANTED | | EXPRESSED | | WANTED | |
| | | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND | RANKED FIRST | RANKED SECOND |
| TEACHER MOST COMFORTABLE | HIGH | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 7 | 4 | 7 |
| | LOW | 4 | 7 | 4 | 7 | 4 | 7 | 4 | 7 | 4 | 7 | 4 | 7 |
| STUDENT MOST COMFORTABLE | HIGH | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 2 | 4 | 7 | 7 | 4 |
| | LOW | 1 | 3 | 4 | 2 | 3 | 7 | 3 | 7 | 4,3* | 4,3* | 4,3* | 4,3* |
| TEACHER LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 | 6 | 1 | 6 | 1 | 6 | 1 | 6 | 1 |
| | LOW | 1,6* | 1,6* | 6 | 1 | 6 | 1 | 6 | 1 | 6 | 1 | 6 | 1 |
| STUDENT LEAST COMFORTABLE | HIGH | 6 | 1 | 6 | 1 | 6 | 7 | 6 | 1 | 6 | 7 | 6 | 1 |
| | LOW | 6 | 4 | 6 | 1 | 6 | 1 | 6 | 4 | 6 | 7 | 6 | 1,7* |

* tie in frequency

The preceeding results are those based upon choices and rankings for most frequently desired settings as first and as first and second most comfortable and least comfortable settings. The primary problem investigated was to determine if significant relationships exist between FIRO-B and comfort and discomfort with classroom settings. To test for independence, observed frequency matrices and chi squares were generated for each of the 24 categories or cells shown in Figure 7. The level of significance was set at .10 and the following first choice relations were found to be significant.

1. Wanted inclusion and most comfortable as teacher.
2. Expressed control and least comfortable as student.
3. Wanted control and most comfortable as teacher.

In an attempt to control for the possibility that one or more of the settings would be chosen unanimously, chi squares were calculated for second choices as well.

The following were found to be significant.

1. Wanted inclusion and least comfortable as teacher.
2. Wanted inclusion and least comfortable as student.
3. Wanted control and least comfortable as student.
4. Expressed affection and most comfortable as teacher.

While not statistically significant, the very low values of chi square for affection wanted and expressed indicates that there is relative independence (Siegel, Chapter 8), i.e., there is no relation between FIRO-B affection scales and most and least comfortable classroom settings, with the possible exception of expressed affection and most comfortable as teacher.

## DISCUSSION

The results would support, at least in part, the notion that there is a relationship between several of the FIRO-B categories and classroom settings which are chosen as being either comfortable or uncomfortable as teacher or student. The following section will attempt to explain the results and also point out data which appears to contradict the assumptions regarding the interpersonal needs-classroom environment relationship.

Setting 5, with no teacher present, was nearly excluded from the Teaching and Learning Preference questionnaire because the authors felt it would be the unanimous selection for least comfortable. This was not the case. Setting 5 was not selected for any category with any consistency worth noting. Our explanation for this is that teachers and students did not consider it to be a real choice. That is, the notion of a learning situation without a teacher is not even considered as feasible. Yet the trend toward independent study, individualized instruction, and the use of students to assist students in the process of learning is becoming increasingly prevalent.

We hypothesized that situation 6 would be a least comfortable choice. This setting was seen as creating ambivalence for teacher and students. The setting is one of high teacher control, although the teacher is not in a traditional teaching position. Likewise, 6 does nothing for those students who desire to control others, or who have inclusion or affection needs, since it does not facilitate either student-student or student-teacher interaction.

Table 2 gives some support to assumptions one, two and three. Persons with high control needs ranked settings 4 and 3 as most comfortable as teacher for first and second rankings. The fact that high control persons chose 3 as second ranked, while low control persons chose 7 supports assumption 2, since setting 7 is seen to put the teacher potentially in a helping rather than a controlling position.

Referring to Table 1, persons with low control needs felt most comfortable as students in setting 7. And, as expected, high control individuals selected setting 7 as being least comfortable as students. Generally, situations 4 and 3 were selected as being most comfortable both as teacher and student.

Perhaps the most startling observation is the general selection of setting 1 as a least comfortable choice. This was not anticipated. Although setting 1 was ranked as second least comfortable for persons with high expressed inclusion needs--students would be expected to have more interaction and control with other students--, in each of the teacher least wanted cells setting 1 is ranked high. This is surprising since the concept of students working in small groups with the teacher helping as needed, would appear as one which is desirable and often used, particularly with the influx of team teaching, multi-grading, etc. This is also the usual arrangement for laboratory work in the sciences. It is even more surprising that, as students, participants did not seem to desire setting one. Only in the case of high control second ranking did 1 appear as a selection for comfortable as student. One possible explanation for the lack of enthusiasm for situation 1, is the belief that students working without the direct assistance of the teacher are not efficient and it is likely to be wasteful of student time.

Not all the results support the basic assumptions. The prevalence of setting 7 as both most comfortable and least comfortable, primarily as a second ranked choice, is confusing at first glance. One explanation may be that setting 7 creates some conflict and ambivalence. In one sense the teacher is in a position of low control, in that the dyads are the focus of activity. Yet, the teacher's mobility to interact with the dyads is high, so there is also an element of high control. Similarly, students, in dyads, are able to influence and interact with one other student extremely well, yet they are prevented by the physical arrangement of the class from influencing and being included in a larger group.

This ambiguity is indicated in Table 4, in which high wanted inclusion persons ranked 3 second for being comfortable as teacher and low wanted inclusion persons selected 7. Intuitively we would have guessed the opposite. This trend is supported by the student least comfortable choices which show the high wanted inclusion people ranking 7 as least comfortable while the low inclusion individuals selected setting 3.

The lack of relationship within the affection dimension is not too surprising. An explanation that seems reasonable is that people would tend to sublimate their affection needs, saying, in effect, that affection needs are not appropriately met in the classroom situation, and therefore are not consciously accepted as important for the learning environment.

We have not attempted to clarify or explain all the consistencies or inconsistencies. The design and results--intended as exploratory--leave many questions unanswered.

With the data reported, particularly the chi square values, we can say that for this sample there does not seem to be a relationship between affection scores on FIRO-B and comfort or discomfort with particular classroom environments. The relationship between inclusion, particularly between high and low need individuals, and comfort is tentative, at best. Control, which intuitively plays an important role in learning and the classroom environment, seems to be related, at least in some categories, to the comfort of students and teachers.

The fact that trends or relationships do appear to exist suggests that a larger sample, randomly selected, with a tighter research design would prove valuable. A laboratory design is one which might clarify questions raised by this study.

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